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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,860	08/17/2001	Craig M. Carpenter	4880US (01-0170)	6588
24247	7590	07/13/2004	EXAMINER	
TRASK BRITT			ZERVIGON, RUDY	
P.O. BOX 2550			ART UNIT	
SALT LAKE CITY, UT 84110			PAPER NUMBER	

1763

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/932,860

Applicant(s)

CARPENTER ET AL. *DN*

Examiner

Rudy Zervigon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. In view of the Appeal Brief filed on September 29, 2004, PROSECUTION IS HEREBY REOPENED. A new rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

### ***Oath/Declaration***

The following is a statement of 37 CFR 3.73:

#### **37 CFR 3.73 Establishing right of assignee to take action.**

(a) The inventor is presumed to be the owner of a patent application, and any patent that may issue therefrom, unless there is an assignment. The original applicant is presumed to be the owner of a trademark application or registration unless there is an assignment.

(b)(1) In order to request or take action in a patent or trademark matter, the assignee must establish its ownership of the patent or trademark property of paragraph (a) of this section to the satisfaction of the Director. The establishment of ownership by the assignee may be combined with the paper that requests or takes the action. Ownership is established by submitting to the Office a signed statement identifying the assignee, accompanied by either:

(i) Documentary evidence of a chain of title from the original owner to the assignee (*e.g.*, copy of an executed assignment). The documents submitted to establish ownership may be required to be recorded pursuant to § 3.11 in the assignment records of the Office as a condition to permitting the assignee to take action in a matter pending before the Office; or

(ii) A statement specifying where documentary evidence of a chain of title from the original owner to the assignee is recorded in the assignment records of the Office (*e.g.*, reel and frame number).

(2) The submission establishing ownership must show that the person signing the submission is a person authorized to act on behalf of the assignee by:

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(i) Including a statement that the person signing the submission is authorized to act on behalf of the assignee; or

(ii) Being signed by a person having apparent authority to sign on behalf of the assignee, *e.g.*, an officer of the assignee.

(c) For patent matters only:

(1) Establishment of ownership by the assignee must be submitted prior to, or at the same time as, the paper requesting or taking action is submitted.

(2) If the submission under this section is by an assignee of less than the entire right, title and interest, such assignee must indicate the extent (by percentage) of its ownership interest, or the Office may refuse to accept the submission as an establishment of ownership.

Applicant is requested, in reply to the present action, to complete PTO/SB/96 (reproduced on the following page) to perfect Applicant's 3.73(b) statement. Applicant's declaration statement of "[x] In an assignment filed herewith for recordation a true copy of which is attached hereto." The assignment is not found in the image file wrapper documentation.

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PTO/SB/98 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**STATEMENT UNDER 37 CFR 3.73(b)**

Applicant/Patent Owner: \_\_\_\_\_

Application No./Patent No.: \_\_\_\_\_ Filed/Issue Date: \_\_\_\_\_

Entitled: \_\_\_\_\_

\_\_\_\_\_, a \_\_\_\_\_  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☐ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.  
The extent (by, percentage) of its ownership interest is \_\_\_\_\_ %

in the patent application/patent identified above by virtue of either:

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

- ☐ Copies of assignments or other documents in the chain of title are attached.  
[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

\_\_\_\_\_  
Date\_\_\_\_\_  
Typed or printed name\_\_\_\_\_  
Signature\_\_\_\_\_  
Title

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-5, and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sajoto et al (USPat. 6,056,823) in view of Whitney (USPat. 4,638,150) and Fukuda; Takuya et al (US 5,496,410 A).

Sajoto teaches a deposition chamber (12, Figure 2; column 4, lines 45-67) including:

- i. A chamber body (12) having a cavity (55, 20; Figure 3A, column 6, lines 45-65) formed therein
- ii. A chamber lid (14, Figure 2; column 4, lines 45-67) configured to enclose the cavity (Figure 2)
- iii. A vapor delivery head (26, Figure 2; column 5, lines 23-35) positioned within the cavity
- iv. A feed through device (40, Figure 3A; column 6, lines 12-44), having a longitudinal body portion (conduit for 40 (not labeled) – column 5, lines 65-67; Figure 3A; compare 208, Figure 2 of Application, [0036]) positioned in the chamber including a lumen (42/44 passage; Figure 2) as a longitudinal body, the feed through device being configured to receive vapor from a vapor source and transfer the vapor there through along a pathway (42, 44; Figure 2, 3A; column 5, line 65 – column 6, line 11) toward the vapor delivery head
- v. At least one resistance (“power lead 67”; column 6, lines 37-44) heating device / resistor element (64, Figure 3A; column 6, lines 30-44) associated with the feed through device
- vi. The heating device includes the resistance heater wherein at least a portion of the resistance heater is positioned within the continual helical groove (62/64 interface) of the feed through

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device – The heater wires are shown in Figure 3A as staggered vertically in cross section which is a helical structure. As shown in Figure 3A, the continual helical groove is configured to complementarily receive the resistance heater (64)

The resistance heater further includes a pair of electrical resistance leads – terminal portion of 67, Figure 3A,

Sajoto further teaches electrical resistance leads (64, Figure 3A) shown to wind along the feed through. Sajoto also further shows (Figure 3A) that his heater (64) is formed into a helical pattern complementary with a continual helical groove.

Sajato does not teach:

- i. Electrical resistance leads having at least a portion thereof disposed within a stainless steel thermally conductive sheathing
- ii. Two resistor elements
- iii. The heating device further includes a thermocouple positioned within the thermally conductive sheathing
- iv. That his heater is either adhered or welded to the feed through device
- v. A layer of thermal insulation disposed between the at least a portion of the heated section of the heating device and the chamber body and substantially circumscribing the longitudinal body portion and the at least a portion of the second heated section
- vi. A temperature sensing device positioned between the layer of insulation and the longitudinal body portion of the feed through device

Whitney teaches a flexible wire heater device (30, Figure 4; column 2, line 42 – column 3, line 5) including:

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- vii. Electrical resistance leads / resistor elements (40; Figure 4; column 5, lines 19-35) having at least a portion thereof (see Figure 4) disposed within a stainless steel thermally conductive sheathing (46; Figure 4; column 5, lines 19-35)
- viii. A layer of thermal insulation (42/44/42 column 5, lines 30-35) disposed between at least a portion of the thermally conductive sheathing (46; Figure 4; column 5, lines 19-35) heated section (40) of the heating device

Fukuda teaches a gas line heating device (13a; Figure 5; column 6; lines 57-61) for a gas conduit (11a; Figure 5) which includes a thermocouple (54a; Figure 5; column 7, lines 1-13) positioned adjacent Fukuda's gas line heater (13a; Figure 5; column 6; lines 57-61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace Sajoto's heater with Whitney's heater and Fukuda's thermocouple, by either adhering or welding Whitney's heater to Sajoto's feed through device, inclusive, permitting a length of Whitney's layer of thermal insulation to be contiguous with Sajoto's longitudinal body portion.

Motivation to replace Sajoto's heater with Whitney's heater and Fukuda's thermocouple by either adhering or welding Whitney's heater to Sajoto's feed through device is to provide a heater with a temperature sensing component to limit elevated temperatures as taught by Whitney (column 2, line 64 – column 3, line 2) and Fukuda (column 7, lines 1-13). Inclusive, motivation to permit a length of Whitney's layer of thermal insulation to be continuous with Sajoto's longitudinal body portion is to conclude the portion of Whitney's heater that is adhered to Sajoto's longitudinal body portion. Further, it is well established that changes in apparatus dimensions are within the level of ordinary skill in the art. (Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984);



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In re Rose , 220 F.2d 459, 105 USPQ 237 (CCPA 1955); In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); See MPEP 2144.04).

***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Rudy Zervigon whose telephone number is (703) 305-1351. The examiner can normally be reached on a Monday through Thursday schedule from 8am through 7pm. The official after final fax phone number for the 1763 art unit is (703) 872-9311. The official before final fax phone number for the 1763 art unit is (703) 872-9310. Any Inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Chemical and Materials Engineering art unit receptionist at (703) 308-0661. If the examiner can not be reached please contact the examiner's supervisor, Gregory L. Mills, at (703) 308-1633.



12/10/4